



## Chapter XIII

# Investigating the Interdependence of Organisations and Information Systems

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### Abstract

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*Using the personal construct theory (PCT) as an underlying conceptual frame, this chapter explores the interdependence of organisations and information systems. Two PCT-related techniques—repertory grid analysis (RepGrid) and cognitive mapping (CM)—were used to investigate the dynamics of this interaction. Changing business models and information technologies were investigated in two distinct work settings: in each case, the technique contributed substantial insight into the role of information systems in that context. The analysis shows that the techniques have*

*matured to a stage where they provide a basis for improved understanding of the organisational complexities related to information technologies. The techniques focus on the social construction of meaning by articulating and interpreting the discourse that surrounds the development, implementation, and use of information technology in organisations. It is these ongoing discourses that create the dynamic complexities in the organisations, as they “play” themselves out, and develop, over time. Current research has articulated and improved awareness of the issues and concerns that surround computer-based information systems (CBIS). Despite the differing contexts and work processes, the findings from each case suggest that the techniques facilitated social construction and increased the conceptual agility of managers, leading to improved integration of organisational processes and technology. The chapter concludes by drawing out the idea of the development of a conceptual model to act as a framework for the analysis of cognitive schema and shared understanding. In developing and participating in this shared understanding, both organisational and technological communities could increase their awareness of each other’s issues and concerns, thereby enabling them to improve the conceptual agility of the organisation.*

## Introduction

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This chapter explores the significance of the social construction of meaning within communities of discourse (Orr, 1996) that surround information technology and organisational management. Organisational discourse is central to the communication of concepts and ideas that enable individuals and groups to: (a) make sense of the world in which they work and (b) understand the changes to work brought about by new technologies, such as information systems (IS). The advantages of focusing research on work processes rather than either technology or the organisation itself has been established in the literature (Orlikowski & Barley, 2001) and adopted in this research. Therefore, this chapter’s focus is on the reciprocal influences of computer-based information systems (CBIS) and organisations on one another.

Technological change, such as that involving CBIS, involves developers, workers, and managers in a complex and extended dialogue. This dialogue is characterised by two important dimensions. First, the level (detail) of design activity ranges widely during the evolution of a CBIS. Second, and perhaps consequentially, responsibility for activity surrounding the CBIS is shared between a number of individuals; such sharing could be simultaneous—in committee, team, or group activities—or sequential. Sequential sharing arises from the episodic nature of project phases. Although formal role assignments might be in place throughout the life of a project, changing responsibilities and work assignments mean that the relationships are constantly re-negotiated as the project progresses. Project phases are characterised

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